

REMARKS

This Amendment is in response to the Office Action mailed September 1, 1999. Claims 1-6 and 8 were rejected in the Office Action; Claims 7 and 9-18 were withdrawn from consideration as being directed to a non-elected species. Claims 1-6 and 8 remain pending and reconsideration of the rejection of these claims is respectfully requested in view of the traversal below. In addition, new Claim 19 has been added by this Amendment. This claim is directed to similar subject matter as Claim 1 and is therefore part of the same species as Claims 1-6 and 8. Consideration of this claim is respectfully requested.

Claim 1 was rejected under 35 U.S.C. 103(a) as being unpatentable over Esko et al. (EP 0 710 618) in view of Müller et al. According to the Office Action, Esko et al. discloses all the elements of the claims except the flat rope drive and Müller et al. discloses a flat drive rope comprising a belt.

Applicants respectfully disagree with this rejection. First, the combination of these two references is not proper. Esko et al. is directed to a traction type elevator system wherein a drive machine is engaged with a set of ropes that both suspend the elevator car and counterweight and, through a traction relationship with the machine, drive the elevator car and counterweight. Müller et al., however, is directed to a self-propelled elevator car that includes a set of ropes between the car and counterweight that are for suspension loads only. These ropes are not driven by traction or in any other manner. The elevator car of Müller et al. is driven by the engagement of the friction wheels (5) and the travel traction surfaces (4). There is no indication or suggestion within Müller et al. that the ropes would perform the functions of both traction and suspension.

In addition, there is no motivation to combine these two references. The alleged motivation cited in the Office Action is to reduce noise in the drive system. However, there is no indication in Esko et al. that noise between the ropes and traction sheave is a problem. Further, there is no suggestion in Müller et al. that the use of a rope such as a belt would provide any noise benefits.

Second, the combination, even if proper, does not result in Applicants' invention as claimed in Claim 1. The entire disclosure of Müller et al. that is allegedly relevant to Claim 1 consists of two sentences as follows:

"However, it [the force transmission means 3] can also be in the form of chains or belts, and any metal, alloy or synthetic fiber can be used as the construction material." (column 3, lines 23-26)

"As mentioned above, cables, chains or belts formed of any desired materials can be used for the force transmission means 3." (column 5, lines 66-67 to column 6, line 1)

There is no further explanation or definition of what is meant by "belts", nor is there any indication that the "belts" are flat ropes as claimed in Claim 1. Therefore, it is not clear what would result from the combination of Esko et al. and Müller et al. In addition, the "cables, chains or belts" referred to in Müller et al. are shown and described as means to apply force to the guide links (6) to urge the friction wheels (5) upwardly and outwardly to provide contact force against the travel track surfaces (4). There is no disclosure or suggestion that these "cables, chains or belts" should or could be engaged with a traction sheave to drive an elevator car.

Finally, there is no disclosure or suggestion in either of the references of the principle benefit of Applicants invention as claimed in Claim 1. This benefit is the ability to reduce the diameter of the traction sheave because of the reduced maximum rope pressures in flat ropes. Minimizing the diameter of the traction sheave minimizes the torque requirements, and therefore the output and size of the entire traction machine may be minimized. As a result, the space required for the machine is minimal and the placement of the machine between the car and hoistway wall is more practical. Nothing in Müller et al. discloses or suggests this benefit.

Therefore, Applicants respectfully request reconsideration of this rejection of Claim 1.

Claims 2-6 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Esko et al. in view of Müller et al. as applied to Claim 1, and further in view of Olsen.

Applicants respectfully disagree with this rejection. First, as discussed above, the combination of Esko et al. and Müller et al. is not proper and, even if it were proper, it does not disclose the invention claimed in Claim 1.

Second, the combination of references does not disclose or teach each and every element of the claimed invention. According to the Office Action, Olsen teaches the use of columns on opposite sides of the shaft. Claim 2, however, includes both the support columns on opposite sides of the hoistway and a support member for the drive motor that extends between the columns. Olsen discloses having the motor (or power unit 42) fastened to a pair of wall supports (24). Therefore, the combination fails to teach each and every element of the claimed invention.

As for Claim 3, the Office Action alleges that Esko et al. discloses a counterweight below the drive sheave and between the car and wall. Claim 3, however, claims the counterweight located underneath the support member. Since none of the references cited in the rejection disclose or teach such a support member (as discussed above with respect to Claim 2), the combination of references cannot teach this arrangement of the elevator components.

As for Claims 4 and 5, these claims depend from Claims 1, 2 and 3 and are therefore patentable for the same reasons as discussed previously with respect to those claims.

As for Claim 6, this claim includes having the flat ropes coupled to the support member. None of the cited references discloses the support member as discussed with respect to Claim 2 and, therefore, this element of Claim 6 is neither disclosed nor taught by the combination of references.

As for Claim 8, this claim depends from Claims 1 and 2 and is therefore patentable for the same reasons as discussed previously with respect to those claims.

Therefore, Applicants respectfully request reconsideration in view of the traversal of this rejection of Claims 2-6 and 8.

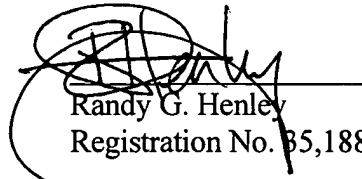
Claim 19 has been added by this Amendment. Claim 19 is directed to similar subject matter as Claim 1 and reads on Species I as identified in the restriction

requirement of the previous Office Action. Applicants respectfully request consideration of new Claim 19.

Inasmuch as neither the structure nor function of Applicants' invention has been anticipated or made obvious, Applicants respectfully request reconsideration and allowance of Claims 1-6 and 8, and consideration and allowance of new Claim 19.

Respectfully submitted,

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